



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/213,581

12/17/1998

IHOR LYS

CKC-012.07

6707

23628

7590

06/05/2002

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER

LEE, WILSON

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/213,581

Applicant(s)

Lys et al.

Examiner

Wilson Lee

Art Unit

2821



– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Mar 15, 2002

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1, 2, 8-26, 41, 42, 45-48, 50-54, and 56-76 is/are pending in the application.

4a) Of the above, claim(s) none is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 2, 8-26, 41, 42, 45-48, 50-54, and 56-76 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 26

6) ☐ Other: _____

Art Unit: 2821

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 8-26, 41, 42, 45-48, 50-54, 56-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phares(5,420,482) cited by applicant in IDS.

Regarding Claims 1, 2, 8-26, 51-54, 56-60, 66-76, Phares briefly discloses a microcontroller(60) as a processor for controlling the amount of electrical current supplied to the illumination display comprised of light elements(48R, 48B, 48G) which generate light of a range of colors(e.g. red, green, blue) to illuminate the object, and a D/A converter that receives the pulse width signal for determining the intensity of the light elements.

As discussed above, Phares essentially discloses the claimed invention but fails to literally or explicitly disclose the light elements as LEDs. However, since Phares does not limit the choices from all kinds of light elements, the implementation of such light element (LEDs) **is not restricted** to his invention. In addition, Phares discloses that those light elements receives digital signals directly from the microprocessor without using any capacitive device or ballast for

Art Unit: 2821

initiating. Therefore, any skilled in the art would understand or recognize that Phares' light elements represent LEDs in figures 6-8.

Moreover, alternatively, it would have been obvious in the knowledge generally available to one of ordinary skill in the art to use LEDs in Phares as light elements in order to attain the following advantages: reduced power consumption, simplicity, low cost, lengthen life, etc. Those advantages of LEDs were well published more than 24 years ago. Please see cited prior arts.

Phares, as discussed above, essentially discloses the claimed invention but fails to explicitly disclose the specific usage as claimed such as *illuminating the floor, an aquarium, an informational board, etc.* However, it would have been obvious to one of ordinary skill in the art to use Phares' invention to illuminate any object directly or indirectly in order to provide brightness to the observer on the object. Since Phares fails to limit the choice of all kind of usage, the implementation of such specific usage is not restricted. Any other usages should be considered as intended uses.

Regarding Claims 41, 42, 45-48, 50, and 61-65, Phares briefly discloses a lighting system comprising a microprocessor(60) for controlling the light elements(48R, 48B, 48G), a driver(94R, 94B or 94G) as a current sink coupled to the light elements(48R, 48B or 48G) (See Figure 4 of Phares) having an input responsive to an activation signal from the control(40); transmitter(64) as an addressable controller having a Logic Control network(76) for providing alterable address, the controller coupled to the input and having Pulse Generator(80) as a signal generator for generating the activation signal for a predefined portion of a timing cycle(See Col. 3, lines 18-26

Art Unit: 2821

of Phares); the addressable controller further comprising an internal shift register means as a receiver or sensor for receiving data corresponding to the alterable address(See Col. 3, lines 57-60 of Phares) and indicative of the prefined portion of the timing cycle(See Figure 1 and Col. 4, lines 4-23 of Phares).

As discussed above, Phares essentially discloses the claimed invention but fails to literally or explicitly disclose the light elements as LEDs. However, since Phares does not limit the choices from all kinds of light elements, the implementation of such light element (LEDs) is **not restricted** to his invention. In addition, Phares discloses that those light elements receives digital signals directly from the microprocessor without using any capacitive device or ballast for initiating. Therefore, any skilled in the art would understand or recognize that Phares's light elements represent LEDs in figures 6-8.

Moreover, alternatively, it would have been obvious in the knowledge generally available to one of ordinary skill in the art to use LEDs in Phares as light elements in order to attain the following advantages: reduced power consumption, simplicity, low cost, lengthen life, etc. Those advantages of LEDs were well published more than 24 years ago. Please see cited prior arts.

Phares, as discussed above, essentially discloses the claimed invention but fails to explicitly disclose the specific usage as claimed such as positioning the system to illuminate a *non-opaque container, vending machine or positioning the system on a piece of clothing or shirt*. However, it would have been obvious to one of ordinary skill in the art to use Phares' invention to illuminate any desired object directly or indirectly in order to provide brightness to the observer from the

Art Unit: 2821

object. Since Phares fails to limit the choice of all kind of usages, the implementation of a such specific usage is not restricted. Any other usages should be considered as intended uses.

3. Claims 1, 2, 8-26, 41, 42, 45-48, 50-54, 56-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strite (5,952,680).

Regarding Claims 1 and 2, Strite discloses an apparatus for projecting multicolor light comprising a LED system for generating a range of colors within a color spectrum(See Col. 3, lines 37+ to Col. 4, lines +16), a processor(93, 98) for controlling an amount of electrical current supplied to the LED system, so that a particular amount of current supplied thereto generates light of a corresponding color within the color spectrum(See Col. 9, lines 48-60, Figure 8).

As discussed above, Strite essentially discloses the claimed invention but fails to explicitly disclose the claimed object which is affected or illuminated by his lighting system or locate the system on the claimed object. However, since Strite does not limit the usage of his invention therefore, it would have been obvious to one of ordinary skill in the art to use his invention to illuminate directly or indirectly any desired objects (e.g. retail display, container, advertising display, stencil, gobo, etc.) or locate it on any desired objects (e.g. display case, vending machine, clothing, etc.) in order to provide abstract information through visualization. Besides, since Strite discloses the main structure as same as the claimed invention, claiming Strite's invention for different kinds of usages does not change the scope of his invention. Different usages as claimed are merely intended uses. Case law: See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Art Unit: 2821

Regarding Claims 17 and 18, Strite discloses that the generated light inherently changes color over time (e.g. the timing signals from time circuit 97) and maintains a constant color through the controller(93) based on the image data from the interface(95).

Regarding Claims 19, 20, 22, 60, Strite discloses his invention can provide an illusion of motion(See Col. 1, lines 50+ to Col. 2, lines +23).

Regarding Claim 24, Strite discloses that the generated light changes color over a period of time in a pre-programmed sequence which is stored in the processor(98) or interface(95).

Regarding Claims 25, 48, 57, Strite discloses an interface(95) as an external transmitter providing external conditions.

Regarding Claims 26, 46, 56, as discussed above, Strite essentially discloses an interface(95) for receiving image data but fails to explicitly disclose the specific interfaces as claimed. Since Strite does not limit the choices of all kinds of interfaces, the implementation of such specific interfaces is not restricted. It would have been obvious to one of ordinary skill in the art to provide a desired interface(e.g. sensor, user input) in order to use his invention in a desired location.

Regarding Claims 41, 42, 45, 51, 58, Strite discloses an apparatus comprising at least one LED, an addressable controller(93, 98, address lines X, Y) having an alterable address, the controller having a signal generator(93) to generate control signals to control light emitted by the LED, a receiver(95) coupled to the addressable controller to receive data corresponding to the alterable address and indicative of the light to be emitted by the LED (See Figure 8).

Art Unit: 2821

As discussed above, Strite essentially discloses the claimed invention but fails to explicitly disclose the claimed object which is affected or illuminated by his lighting system or locate the system on the claimed object. However, since Strite does not limit the usage of his invention therefore, it would have been obvious to one of ordinary skill in the art to use his invention to illuminate directly or indirectly any desired objects (e.g. retail display, container, advertising display, stencil, gobo, etc.) or locate it on any desired objects (e.g. display case, vending machine, clothing, etc.) in order to provide abstract information through visualization. Besides, since Strite discloses the main structure same as the claimed invention, claiming Strite's invention for different kinds of usages does not change the scope of his invention. Different usages as claimed are merely intended uses. Case law: See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding Claim 47, Strite discloses his invention inherently being capable of recording data and replaying the recorded data since interface(95) must store the received image data then transmit to the controller(93) for displaying.

Regarding Claim 50, Strite discloses the LED being capable of displaying a programmable lighting effect from the interface(95) (See Col. 22, lines 10-14).

Regarding Claims 52, 63, Strite discloses the LED system including red LED, blue LED, and green LED(See Col. 14, lines 52-65).

Art Unit: 2821

Regarding Claim 53, Strite discloses the LED system comprising a plurality of LEDs having a plurality of colors, a processor(93) receiving inputs and controlling the activation signals in response to the received inputs(See Figure 8).

Regarding Claims 54, 59, 61, 62, Strite discloses activation signal including pulse modulated signal(from pulse generator 99), an intensity of a color of the LED system being responsive to a duty cycle of the pulse width modulated signal(See Figure 8 and Col. 22, lines 10-28).

Regarding Claim 64, Strite discloses that the LED system includes at least one LED being adapted to emit light at two or more wavelengths(See Col. 4, lines 12-15).

Regarding Claim 65, Strite discloses that the microprocessor(93, 98) controls the LED system to generate one or more illumination patterns based on the image data from the interface(95) (See Col. 1, lines 50+ to Col. 2, lines +23).

Regarding Claims 66-68, 73-76, as discussed previously in the rejection above on claims 41, 42, 45, 51, 53, 54, 58, 59, 61, 62, Strite meets the limitation of claims 66-68, 73-76.

Regarding Claims 8-16, 21, 23, 69-72, as discussed previously in the rejection above, it would have been obvious to one of ordinary skill in the art to use his invention to illuminate directly or indirectly any desired objects (e.g. retail display, container, advertising display, stencil, gobo, etc.) or locate it on any desired objects (e.g. display case, vending machine, clothing, etc.) in order to provide abstract information through visualization. Different usages as claimed are

Art Unit: 2821

merely intended uses. Case law: See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Response to Arguments

4. Applicant argues that Examiner fails to establish prima facie case of obviousness.

Examiner disagrees.

First, suggestion or motivation may be either in the cited reference or *in the knowledge generally available to one of ordinary skill in the art*. Examiner is not required to find out a suggestion or motivation in a cited reference since such motivation is in the knowledge generally available to one of ordinary skill in the art. In addition, Examiner did provide several references that indicate motivation of using LED in order to acquire its advantages. Second, reasonable expectation of success ~~since~~ does exist. Merely using the Phares (or Strite) invention for illuminating any different objects (such as the objects as claimed) is reasonably success. Finally, the prior art disclose all the claimed features on the rejected claims (See rejections above).

5. Applicant argues that Phares fails to disclose LED but rather incandescent lights.

Examiner disagrees.

Nowhere in Phares is there any incandescent light as asserted by applicant.

Further, the lighting elements of Phares is switched frequently by the transistors(T1-T3) controlled by microprocessor. Any skilled in the art would recognize that incandescent light is very insufficient being switched on/off frequently since the repetitious excitations of the filaments and gas inside the incandescent light would elevate excessive heat of the filaments, it would

Art Unit: 2821

shorten the life of the filaments. Moreover, incandescent light requires capacitive means or ballast embedded in the threaded base or bulb for exciting the filaments (See cited references: Matsuda '408 and Anderson '086). Therefore, incandescent light being used by Phares is unlikely possible. Besides, LED Christmas or ornamental lights have long been being used (See cited references: Moore '284, Boldin '948 and Sanders '079). Accordingly, LEDs being used in Phares is more reasonable.

6. In response to applicant's argument that Phares fails to disclose his invention being used in a retail display, clothing, vending machine, beverage container, gobo, etc, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. Case law: See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsuda et al. (5,432,408) and Anderson et al. (3,858,086) disclose incandescent lamp comprising ballast or capacitive means. Moore et al. (5,412,284), Boldin et al. (5,256,948) and Sanders et al. (4,682,079) discloses Christmas lighting system comprising a plurality of LEDs controlled by integrated circuit or the like. Brooks (5,083,063) discloses a similar invention

Art Unit: 2821

comprising a current sink, LED, a processor, a control circuit, a switch and a D/A converter. Tai et al. (5,371,618) and Mohebban (4,818,072) discloses the advantages of LCD system over LED system. Molldrem, Jr. (4,388,589) discloses that blue LED was discovered at that time (See Abstract of Molldrem). Bergey et al. (3,974,637), Stockinger et al. (3,958,885) and Wakamatsu et al. (3,909,670) all show the advantages of using LEDs.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (703) 306-3426.

Art Unit: 2821

10. If attempts to reach examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (703) 308-4856.

11. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

12. Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.



TAN HO
PRIMARY EXAMINER

WL

06/03/02